

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

A22NM  
Revision 13  
A-1  
A-1A  
A-1B

August 18, 2003

**TYPE CERTIFICATE DATA SHEET NO. A22NM**

This data sheet which is part of Type Certificate No. A22NM prescribes conditions and limitations under which the product for which the type certificate was issued meets the Airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Sky International Inc. (See Note 11)  
672 South Washington Street  
Afton, Wyoming 83110

Type Certificate Ownership Record: Christen Industries transferred ownership of Type Certificate A22NM to Aviat, Inc. on April 4, 1991.

Aviat, Inc. transferred ownership of Type Certificate A22NM to White International, LTD. on December 3, 1992.

White International, LTD. transferred ownership of Type Certificate A22NM to Sky International, Inc. on January 10, 1996.

**Model A-1, 2PCLM (Normal Category), Approved May 1, 1987**

Engine Lycoming O-360-C1G (180 HP), or  
Lycoming O-360-A1P (180 HP)

Fuel 100/100LL grade aviation gasoline

Engine Limits For all operations, 2700 RPM

Propeller and Propeller Limits Hartzell HC-C2YK-1Bf/F7666A (Constant Speed)  
Diameter not over 76 in., not under 72 in.  
(See Note 3)  
Pitch settings at 30 in. station low  
 $11.7^{\circ} \pm .2^{\circ}$ , high  $29.0^{\circ} \pm 1.0^{\circ}$ ,  
(See Note 9)  
Hartzell spinner assy 836-60 (Required).

Hartzell governor V3-6  
Placard required: **"AVOID CONTINUOUS OPERATIONS  
BETWEEN 2000-2250 RPM"**

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**Model A-1, 2PCLM (Normal Category), Approved May 1, 1987(cont'd)**

Airspeed Limits (CAS)	Never Exceed Maximum Structural Cruising Maneuvering Flaps Extended	153 mph (133 knots) 119 mph (103 knots) 94 mph (82 knots) 73 mph (63 knots)
C.G. Range	(+74.5) to (+78.4) at 1800 lbs (+72.5) to (+78.4) at 1500 lbs and below Straight line variation between points given	
Empty wt. C.G. Range	None  Datum 60 in. forward of wing leading edge	
Leveling Means	Cabin door, lower sill	
Maximum Weight	1800 lbs	
No. of Seats	2 (1 at +72.5 and 1 at +99.0)	
Maximum baggage	50 lb. (at +120.0)	
Fuel Capacity	52 gal. (two 26 gal. Tanks in wings at +84.0) 50 gal usable. See NOTE 1 for data on unusable fuel.	
Oil Capacity	8 qts. (+25.9)	
Control Surface Movements	Elevator UP $29^{\circ} \pm 1^{\circ}$ DOWN $15^{\circ} \pm 1^{\circ}$ Ailerons UP $20^{\circ} \pm 2^{\circ}$ DOWN $20^{\circ} \pm 2^{\circ}$ Rudder LEFT $25^{\circ} \pm 2^{\circ}$ RIGHT $25^{\circ} \pm 2^{\circ}$ Flaps UP $0^{\circ}$ DOWN $30^{\circ} + 0^{\circ}, -2^{\circ}$	
Serial Nos. Eligible	1001 To 1394	
Certification Basis	Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-12, FAR 21 amended thru 21-57  Application for Type Certificate dated November 20, 1985.  Type Certificate No. A22NM issued May 1, 1987.	
Production Basis	Production Certificate No. 2NM	
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following items of equipment are required: 1. FAA Approved Airplane Flight Manual 2. Stall Warning indicator. 3. Cylinder head temperature gage.	

**Model A-1A, 2PCLM (Normal Category), Approved January 28, 1998**

The A-1A is a derivative model of the A-1. The A-1A has a gross weight of 1890 lbs. The airframe has been modified structurally to accept this higher gross weight.

Engine	Lycoming O-360-A1P (180 HP)	
Fuel	100/100LL grade aviation gasoline	
Engine Limits	For all operations, 2700 RPM	
Propeller and Propeller Limits	Hartzell HC-C2YK-1BF/F7666A (Constant Speed) Diameter not over 76 in., not under 72 in. (See Note 3) Pitch setting at 30 in. station low $11.7^{\circ} \pm .2^{\circ}$ , high $29.0^{\circ} \pm 1.0^{\circ}$  Hartzell governor V3-6 <b>Placard required: "AVOID CONTINUOUS OPERATIONS BETWEEN 2000-2250 RPM"</b>	
Airspeed Limits (CAS)	Never Exceed Maximum Structural Cruising Maneuvering Flaps Extended S/N 1395 to 1429 S/N 1430 and up (See Note 14)	153 mph (133 knots) 119 mph (103 knots) 99 mph (86 knots)  73 mph (73 knots) 80 mph (70 knots)
C.G. Range	(+74.5) to (+78.4) at 1890 lbs (+72.5) to (+78.4) at 1500 lbs and below Straight line variation between points given	
Empty wt. C.G. Range	None	
Datum	60 in. forward of wing leading edge	
Leveling Means	Cabin door, lower sill	
Maximum Weight	1890 lbs	
No. of Seats	2 (1 at +72.5 and 1 at +99.0)	
Maximum baggage	50 lbs (+120.0)	

**Model A-1A, 2PCLM (Normal Category), Approved May 1, 1987 (cont'd)**

Fuel Capacity	52 gal. (two 26 gal. Tanks in wings at +84.0) 50 gal usable. See NOTE 1 for data on unusable fuel.
Oil Capacity	8 qts. (+25.9)
Control Surface Movements	Elevator UP $29^{\circ} \pm 1^{\circ}$ DOWN $15^{\circ} \pm 1^{\circ}$ Ailerons UP $20^{\circ} \pm 2^{\circ}$ DOWN $20^{\circ} \pm 2^{\circ}$ Rudder LEFT $25^{\circ} \pm 2^{\circ}$ RIGHT $25^{\circ} \pm 2^{\circ}$ Flaps UP $0^{\circ}$ DOWN $30^{\circ} + 0^{\circ}, -2^{\circ}$
Serial Nos. Eligible	1395 to 1999
Certification Basis	Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-12., FAR 21 amended thru 21-57  Application for Type Certificate dated August 25, 1997.  Type Certificate No. A22NM issued January 28, 1998.
Production Basis	Production Certificate No. 704NM
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following items of equipment are required:  <ol style="list-style-type: none"> <li>1. FAA Approved Airplane Flight Manual</li> <li>2. Stall Warning indicator</li> <li>3. Cylinder head temperature gage</li> </ol>

**Model A-1B, 2PCLM (Normal Category), Approved January 28, 1998**

The A-1B is a derivative model of the A-1. The A-1B has a gross weight of 2000 lbs. The airframe has been modified structurally to accept this higher gross weight. The C.G. envelope has been expanded forward and aft. NOTE: See serial numbers eligible under this model.

Engine	Lycoming O-360-A1P (180 HP)
Fuel	100/100LL grade aviation gasoline
Engine Limits	For all operations, 2700 RPM
Propeller and Propeller Limits	Hartzell HC-C2YK-1BF/f7666A (Constant Speed) Diameter not over 76 in., not under 72 in. (See Note 3) Pitch setting at 30 in. station low $11.7^{\circ} \pm .2^{\circ}$ , high $29.0^{\circ} \pm 1.0^{\circ}$ (See Engine Option Group Configuration for optional propeller and propeller limits.)  Hartzell spinner assy 836-60 (Required). Hartzell governor V3-6

Placard required: **"AVOID CONTINUOUS  
OPERATIONS BETWEEN 2000-2250 RPM"**

Airspeed Limits (CAS)	Never Exceed	153 mph (133 knots)
	Maximum Structural Cruising	119 mph (103 knots)
	Maneuvering	113 mph (98 knots)
	Flaps Extended	80 mph (70 knots)
	(See Engine Option Group Configuration for Airspeed Limits.)	

C.G. Range	(+73.6) to (+80.0) at 2000 lbs (+71.0) to (+80.0) at 1530 lbs and below Straight line variation between points given
Empty wt. C.G. Range	None
Datum	60 in. forward of wing leading edge
Leveling Means	Cabin door, lower sill
Maximum Weight	2000 lbs
No. of Seats	2 (1 at +72.5 and 1 at +99.0)
Maximum baggage	50 lb. (+120.0)
Fuel Capacity	52 gal. (two 26 gal. Tanks in wings at +84.0) 50 gal usable. See NOTE 1 for data on unusable fuel.
Oil Capacity	8 qarts. (+25.9)
Control Surface Movements	Elevator UP $29^{\circ} \pm 1^{\circ}$ DOWN $15^{\circ} \pm 1^{\circ}$ Ailerons UP $20^{\circ} \pm 2^{\circ}$ DOWN $20^{\circ} \pm 2^{\circ}$ Rudder LEFT $25^{\circ} \pm 2^{\circ}$ RIGHT $25^{\circ} \pm 2^{\circ}$ Flaps UP $0^{\circ}$ DOWN $30^{\circ} + 0^{\circ}, -2^{\circ}$
Serial Nos. Eligible	2000 and up New optional rear spar material incorporated at S/N 2001. Was 6061-T6. Is: 7075-T76. (See Engine Option Group Configuration for Serial Nos. Eligible.)
Certification Basis	Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-12, FAR 21 amended thru 21-57.  Application for Type Certificate dated August 25, 1997. Type Certificate No. A22NM issued January 28, 1998.
Production Basis	Production Certificate No. 704NM
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following items of equipment are required: 1. FAA Approved Airplane Flight Manual 2. Stall Warning indicator. 3. Cylinder head temperature gage.

**Engine Option Group Configuration (Normal Category), Approved August 18, 2003**

(The Engine Option Group Configuration is a model A-1B, 2PCLM)

Model A-1B, effective serial numbers NF0001 and above, are equipped with all of the following optional items. Notes 3, 4, 5, 6, 8, 9, 13, 15, 16, 18, 19, 20, and 21 do not apply to Engine Option Group Configuration.

Note: A-1B with Engine Option Configuration requires Approved Airplane Flight Manual dated August 18, 2003.

A.	Engine	Lycoming O-320-D2A (160 HP) Type Certificate Data Sheet (TCDS) E-274
	Fuel	100 or 100LL grade aviation gasoline
	Engine Limits	For all operations, 2700 RPM

- B. Propeller Sensenich 74DM6S8-0-58  
 Propeller Limits    Diameter: Not over 74 in., not under 72 in.  
                                  Static RPM Not over 2350 RPM, not under 2150 RPM  
                                  No additional tolerance permitted.  
                                  Sensenich spinner assy C2366 (Required).
- C. Flapless Wing  
 (No Flaps or flap control system installed, Wing tips unique)
- D. Unique Engine Cowl
- E. Approved main gear tires with this option group.  
      6.00 x 6 4-ply Type III tube  
      8.00 x 6 4-ply, Type III tube.  
      8.50 x 6 6-ply, Type III tube.
- F. Aircraft with Engine Option Group are approved for Day VFR only. Not approved for Instrument Flight Rules (IFR) operation under the provisions of § 91.205(d) of the Federal Aviation Regulations
- G. Serial Nos. Eligible    NF0001 and up
- H. Certification Basis    Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-24. FAR 21 amended thru 21-57.

- NOTE 1            Current weight and balance report, together with list of equipment included in certificated empty weight must be provided for each aircraft at the time of the original certification. The certified empty weight and corresponding center of gravity location must include unusable fuel of 12.0 lb. at (+84.0)
- NOTE 2            All placards specified in the FAA approved Airplane Flight Manual must be displayed in the airplane in the appropriate locations.
- NOTE 3            Aircraft Flight Manual Supplement, Revision F, dated October 14, 1988, is required for propeller diameters less than 76".  
                          This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM. See note under Engine Option Group Configuration for Airplane Flight Manual applicability.
- NOTE 4            Export aircraft to Germany incorporating the Lycoming 0-360-C1G engine are certified for use with a 72 inch dia. Propeller, VFR day and night only, and 2550 RPM max. continuous power, with 2700 RPM max. take-off power for 5 minutes. Export aircraft to Austria, Germany, or Switzerland incorporating the Lycoming 0-360-A1P engine must have a 72 inch dia. Propeller and be limited to 2400 RPM max. continuous power and 2700 RPM max. continuous take-off power for 5 minutes. Aviat Aircraft Inc. Flight Manual Supplement dated December 1, 1994 or later FAA approved revision is required.  
                          This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 5            Model A-1, A-1A and A-1B are approved for use with Aero Ski Models M1500, M1800, M2000, and M3000H installed per Christen Drawing 35569. Christen Airplane Flight Manual Supplement, dated April 11, 1988, or later FAA approved revision for fixed ski operation is required.  
                          This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 6            The Model A-1, A-1A and A-1B is approved for banner and glider towing when a Schweizer tow hook is installed in accordance with Aviat Drawing 35572. Aviat Aircraft Flight Manual Supplement, dated September 1, 1988, or later FAA approved revision for banner and glider tow operations is required.  
                          This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 7            The Model A-1 is approved for use with EDO 89-2000 Floats installed in accordance with Christen Drawing 35600. Christen Aircraft Flight Manual Supplement, dated February 28, 1989, or later FAA approved revision for the floatplane configuration is required. The maximum aircraft gross weight with EDO 89-2000 floats installed is 1980 pounds.

- NOTE 8 Models A-1, A-1A and A-1B are approved for use with Aero Ski Models R2800 retractable ski installed per Christen Drawing 35593. Christen Airplane Flight Manual Supplement, dated Nov 7, 1989, or later FAA approved revision for retractable ski operation is required. This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 9 These aircraft propellers may be reset to the page 1 setting if accomplished by an FAA approved propeller repair station. Serial Numbers 1001 thru 1222 were set to a low pitch setting of 13°, +0°, -5° This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 10 Model A-1, A-1A and A-1B are approved for use with optional skylight panel installed in accordance with Aviat Aircraft Inc. drawing 35640.
- NOTE 11 Aviat Aircraft Inc., P.O. box 1240 , 672 South Washington Street, Afton, Wyoming is licensed by Sky International Inc. to manufacture and obtain airworthiness certificate for the Model A-1, A-1A, and A-1B aircraft listed in the Type Certificates Data Sheet.
- NOTE 12 Model A-1 is approved for use with Horizon Instruments Model P-1000 Digital Engine Tachometer. Aviat Aircraft Inc. Flight Manual Supplement date Dec. 4, 1997 or later FAA approved revision is required.
- NOTE 13 The following main gear tires are approved for use on models A-1, A-1A and A-1B:  
6.00 x 6 4-ply Type III tube  
8.00 x 6 4-ply Type III tube.  
8.50 x 6 6-ply Type III tube.  
24 x 10-6 Type III Tundra  
26 x 10.5-6 Tundra and 8.50 x 6 tube.  
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 14 Model A-1A S/N 1395 to 1429 are eligible for increased flap speed of 80 mph if airspeed indicator P/N 81714 is installed and Airplane Flight Manual is updated to reflect 80 mph flap speed.
- NOTE 15 Models A-1A, and A-1B are approved for use with Baumann Model BF- 2100 Floats installed in accordance with Aviat Aircraft Drawing 37600. The A-1 is float certified at 1980 pounds GW, the A-1A is float certified at 2079 pounds GW (1890 lbs. for A-1A land plane + 189 lbs. for floats), and the A-1B is float certified at 2200 pounds GW. FAA approved Flight Manual Supplement dated August 31, 1998 or later for above float plane configurations is required. This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 16 Models A-1, A-1A, and A-1B are approved for use with the Alaskan Bushwheel P/N 31136, 31" Diameter Tundra tire. Model A-1 must have the Aero Ski gear P/N 35017-503 and 35017-504 installed in conjunction with the 31" tundra tires P/N 31136. The Scott 10" Model L3450 tail wheel must also be installed per Aviat Aircraft Drawing 35340 on the model A-1 and A-1A or per Aviat Aircraft Drawing 37340 on the Model A-1B. FAA approved Flight Manual Supplement dated September 18, 1998 or later for the Tundra Tire configuration is required. This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 17 Models A-1A effective serial numbers 1451 and above, A-1B effective serial numbers 2007 and above and A-1B with Engine Option Group Configuration effective serial numbers NF0001 and above are equipped for a baggage area access door located below the right hand aft side window. The door is optional for the A-1A and the A-1B and is available as a production design change only on the serial numbers listed above.
- NOTE 18 Models A-1, A-1A and A-1B are approved for use with the Vision Microsystems Inc. VM1000 Engine Monitoring System when installed in accordance with Aviat Master Drawing List 95-0, dated 25 October 1999. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for the Vision Microsystem VM1000 Engine Monitoring System, dated 18 August 1999 and Supplemental Instructions for Continued Airworthiness - VM1000 Engine Monitoring System, dated 5 August 1999, or later revisions, are required. This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.

- NOTE 19       Models A-1, A-1A and A-1B are approved for use with the Vision Microsystems Inc. VM1000 Engine Monitoring System with IFR equipment when installed in accordance with Aviat Master Drawing List 95-0, Revision A dated 25 October 1999. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for the Vision Microsystems VM1000 Engine Monitoring System, dated 18 August 1999 and Supplemental Instructions for Continued Airworthiness - VM1000 Engine Monitoring System, Revision B dated 5 August 1999, or later revisions, are required.  
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 20       Models A-1, A-1A and A-1B are approved for use with the Aviat Aft Stowage Compartment when factory-installed in accordance with Aviat Master Drawing List 96-00-00, Revision F dated 5/28/2000, or field installed per Aviat Service Bulletin 16, dated 4/19/2000 as Aviat Kit A-1-351 Revision D. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for Models A-1, A- 1A, A-1B with the Aft Stowage Compartment Installed, dated 4/28/2000 and Supplemental Instructions for Continued Airworthiness - Aft Stowage Compartment, dated 4/17/2000, or later revisions, are required.  
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 21       Models A-1, A-1A and A-1B are approved for use with the Fluidyne Model C-2200 Retractable Skis when installed in accordance with Aviat Husky Service Bulletin 15, Fluidyne C-2200 Retractable Ski Installation and Operation; A-1/A-1A Forward CG Expansion, dated 6/14/1999. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for Fluidyne Skis, dated 6/25/1999 and Supplemental Instructions for Continued Airworthiness - Fluidyne C2200 Retractable Skis, dated 6/25/1999, or later revisions, are required.  
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.

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